I Claim:

1. A radio transmitter for transmitting signals in a designated frequency band, comprising:

a transmit filter adapted to filter a signal to be transmitted from the transmitter to suppress the transmission of parts of said signal outside the band; and

a compensating filter adapted to filter said signal upstream from the transmit filter, wherein:

the compensating filter is adapted to alter said signal to counteract at least one of a phase ripple, an amplitude ripple, and a group delay variation of the transmit filter within said band.

2. A transmitter according to claim 1, wherein the compensating filter is adapted to alter said signal to counteract the phase ripple of the transmit filter within said band.

3. A transmitter according to claim 1, wherein the compensating filter is adapted to alter said signal to counteract the amplitude ripple of the transmit filter within said band.

4. A transmitter according to claim 1, wherein the compensating filter is adapted to alter said signal to counteract the group delay variation of the transmit filter within said band.

5. A transmitter according to claim 1, wherein the compensating filter is adapted to alter said signal to counteract at least two of the phase ripple, the amplitude ripple, and the group delay variation of the transmit filter within said band.

6. A transmitter according to claim 1, wherein the compensating filter is adapted to alter said signal to counteract the phase ripple, the amplitude ripple, and the group delay variation of the transmit filter within said band.

7. A transmitter according to claim 1, further comprising:

an assessor adapted to compare said signal upstream from the transmit filter with said signal downstream from the transmit filter in order to provide an indication of residue of at least one of phase ripple, amplitude ripple, and group delay variation within said band; and

a controller adapted to adjust the compensating filter, under the guidance of the assessment performed by the assessor, to reduce said residue.

8. A transmitter according to claim 1, further comprising:

a power amplifier adapted to amplify said signal in readiness for transmission; and

a lineariser adapted to counteract distortion introduced to said signal by said amplifier.

9. A transmitter according to claim 8, wherein the lineariser is adapted to sample said signal downstream from said amplifier to provide a measure of distortion caused by said amplifier.

10. A transmitter according to claim 8, wherein the lineariser is further adapted to counteract distortion introduced to said signal by the transmit filter.

11. A transmitter according to claim 8, wherein the lineariser is adapted to sample said signal downstream from said amplifier and downstream from the transmit filter to provide a measure of distortion caused by the transmit filter and said amplifier.

12. A transmitter according to claim 8, wherein the lineariser is a predistorter for altering said signal upstream from said amplifier.

13. A transmitter according to claim 8, comprising:

a feed back path adapted to sample said signal downstream from said amplifier for use in adjusting the lineariser; and

a switch in said path adapted to allow the sampling of said signal to occur downstream of the transmit filter for use in adjusting the compensating filter or upstream from the transmit filter.

14. A transmitter according to claim 8, further comprising:

a feedback path adapted to sample said signal downstream from said amplifier and from said transmit filter for use in adjusting the lineariser and the transmit filter; and

a correcting filter adapted to correct the sampled signal as used by the lineariser for the effect of roll-off in the characteristic of the transmit filter.

15. A transmitter according to claim 1, wherein the compensating filter is adapted to operate in the digital domain.

16. A radio transceiver for transmitting signals in a designated frequency band, comprising:

a transmit filter adapted to filter a signal to be transmitted from the transmitter to suppress the transmission of parts of said signal outside the band; and

a compensating filter, operating in the digital domain, adapted to filter said signal upstream from the transmit filter;

an antenna adapted to allow signals to be transmitted to and from the transceiver;

a receiver facet adapted to receive signals arriving at the antenna; and

a diplexer adapted to allow said signal to be sent towards said antenna and further adapted to pass signals from the antenna to the receiver facet;

wherein the compensating filter is adapted to alter said signal to counteract at least one of a phase ripple, an amplitude ripple, and a group delay variation of the transmit filter within said band.17. A method for transmitting signals in a designated frequency band,

comprising:

transmit filtering a signal to be transmitted to suppress the transmission of parts of said signal outside the band; and

compensation filtering said signal upstream from the transmit filtering, wherein the compensation filtering alters said signal to counteract at least one of a phase ripple, an amplitude ripple, and a group delay variation of the transmit filtering within said band.